

REMARKS

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-3, 5-11 and 13-27 remain pending in the application, with Claims 1, 7, 10, 17, 20, 23 and 27 being independent. Claims 1, 7, 10, 11, 13, 17, 20, 23 and 27 have been amended herein.

Claims 1, 2, 5, 6, 17-19 and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,390,700 (Foster et al.). Claims 1, 2, 5-10 and 13-27 were rejected under 35 U.S.C. § 102(e) as being anticipated U.S. Patent No. 6,769,683 (Hiramatsu). Claims 3 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Foster et al. Claims 3, 6, 11, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiramatsu. These rejections are respectfully traversed.

Each of the independent claims now recites that the bearing encloses an entire periphery of a predetermined portion of a spindle of the conveyance roller. Such a configuration can prevent dust from reaching the contact portions of the bearing.

As shown in Figure 5B, the imaging apparatus of Foster et al. includes first and second bearing surfaces 146, 152. However, the bearings in Foster et al. do not enclose an entire periphery of any portion of the feed roller. Although the conventional

roller shown in Figure 1 of Foster et al. depicts a round bearing 10, this bearing does not provide the two contact portions.

Further, as discussed previously, the two bearing surfaces in Foster et al. are symmetrical with respect to plane of symmetry 160. A direction perpendicular to a line coupling the two contact portions of the bearing surfaces and shaft 124 could be on the plane of symmetry 160, which could be arranged vertically. However, Applicant must stress that Foster et al. does not describe the position or the direction in which back-up rollers 32 contact and apply the pressing force to the feed rollers provided on shaft 124. Accordingly, based on the description of Foster et al., one of ordinary skill in the art cannot reasonably determine the relation of a vector direction of forces exerted on the bearing when the conveyance rollers are stopped in direction perpendicular to a line coupling the two contact portions.

The Office Action takes the position that, with regard to Foster et al., at least a part of the force from rollers 132 is applied in a downward direction to the shaft 124 and that particular force vectors can be determined from the contact points. Further, the Office Action suggests that the claims do not specify the range of vector directions or exertions force, so Foster et al. meets the claims. Applicant submits, however, that although no numerical range is stated, the claims do define the limits of the range of vector directions. For example, Claim 1 recites that the range is “of varying exertion forces exerted on the bearing when the conveyance roller is stopped and when the conveyance

roller is rotated.” It cannot be said with any certainty that such a perpendicular line in Foster et al. would be within such a range.

Accordingly, Foster et al. fails to disclose or suggest at least that the bearing (or chassis) supports the conveyance roller (or bearing) so as to locate a direction perpendicular to a line coupling the two contact portions within a range of vector directions of varying exertion forces exerted on the bearing when the conveyance roller is stopped and when the conveyance roller is rotating, as is recited in independent Claims 1, 7 and 10.

Foster et al. also does not disclose or suggest at least that a direction perpendicular to a line coupling two contact portions is located, in an arbitrary cross-section perpendicular to the axial direction of the conveyance roller, to correspond with the combined vector of an exerting force at a state of stopping and at an exerting force at a state of starting the conveyance roller, as is recited in independent Claim 27.

Furthermore, Foster et al. does not disclose or suggest at least that a direction perpendicular to a line coupling the two contact portions is located, in an arbitrary cross-section perpendicular to the axial direction of the conveyance roller (or bearing), within a range of vector directions of varying exertion forces exerted on the bearing when the conveyance roller is stopped and when the conveyance roller is rotating, as is recited in independent Claims 17, 20 and 23.

Thus, Foster et al. fails to disclose or suggest important features of the present invention recited in the independent claims.

As noted previously, the image recording apparatus of Hiramatsu includes a conveying roller 14 and a pinch roller 21. In Figure 3, conveying roller 14 is rotatably supported by a bearing 20, which supports roller shaft portion 14a. Shaft portion 14a is stabilized to be in tangential contact with two bearing arc portions 20a of bearing 20 at contact lines 20c. However, Applicant submits that Hiramatsu does not describe any change in direction of forces exerted on the bearing, nor is there any discussion of a direction perpendicular to a line coupling the two contact portions. As discussed above, while the pending claims do not point out any specific numerical range of vector directions or exertion forces, they nevertheless do define the range. Hiramatsu is silent as to whether such vector directions or exertion forces could be within the range defined in the claims. Hiramatsu is also not believed to disclose or suggest the features recited in the independent claims noted above as being deficient in Foster et al.

Thus, the independent claims are patentable over the citations of record. Reconsideration and withdrawal of the §§ 102 and 103 rejections are respectfully requested.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by independent Claims 1, 7, 10, 17, 20, 23 and 27. Dependent Claims 2, 3, 5, 6, 8, 9, 11, 13-16, 18, 19, 21, 22 and 24-26 are also allowable, in their own right, for defining features of the present invention in addition to those recited in

their respective independent claims. Individual consideration of the dependent claims is requested.

This Amendment After Final Rejection is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to clearly place this application in condition for allowance. This Amendment was not earlier presented because Applicants earnestly believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of this Amendment under 37 CFR 1.116 is respectfully requested.

Applicant submits that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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